I.   Rejection of claims 1, 2, 5 and 7 under 35 U.S.C. § 103

Claims 1, 2, 5 and 7 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art (APA) of the instant application in view of Mukherjee (U.S. Patent No. 6,226,322).

Claim 1 recites "wherein said means for producing carrier constellation information is **adapted** to produce for at least one respective carrier subset a set of parameter values from which constellations of **all** carriers in said **at least one respective carrier subset can be retrieved through interpolation**."

The Examiner asserts that the APA teaches all of the elements of claim 1 except that at least one respective carrier subset can be retrieved through interpolation. However, Applicant submits that contrary to the Examiner's assertions, the APA does not teach the elements of claim 1.

As discussed on page 1, line 7 to page 2, line 7 of the Applicant's specification, ANSI T1.413-1998 discloses in paragraph 9.8.13 that the central office DSL transceiver produces bits and gains information (i.e. constellation information) for the ADSL upstream carriers and transmits this bits and gains information to the remote ADSL transceiver encapsulated in a message named C-B&G. The constellation information produced and transmitted comprises 16 bits. Upon receipt by the ADSL transceiver, the bits and gains information is used to control the upstream data modulator and the ADSL transceiver has to produce similar bits and gains information for the ADSL downstream carriers. In an ADSL system, 256 carriers or tones are

used in a frequency division duplexed way to convey upstream and downstream data. The

aggregate constellation information to be transferred during the initialization procedure is 512

bytes long which delays the initialization procedure.

Therefore, the exemplary embodiment of the present invention avoids the long duration

of transferring constellation information by grouping the carriers into subsets and transmitting

for each subset only a limited set of parameter values as constellation information. The

constellation of each carrier in the subset can consequently be derived through interpolation.

Therefore, as discussed above, and contrary to the Examiner's assertion, in the APA, the

parameter values are **not** grouped in a subset and are individually transferred as constellation

information, consequently leading to long initialization times. Assuming *arguendo* the bit values

(b_i) and the gain values (g_i) could be considered a subset and assuming Mukherjee discloses the

claimed interpolation, there would be no need to retrieve parameter values for carriers by

interpolation in the APA since in the APA, the parameter values are not grouped into subsets and

all of the parameter values are individually transferred.

The Examiner asserts that Mukherjee Fig. 4, element 44C, Fig. 9, element 96 and col. 22,

lines 27-34 discloses "a set of parameter values from which constellations of all carriers in said

at least one respective carrier subset can be retrieved through interpolation." However, the

respective Figures and column and lines cited by the Examiner disclose the use of interpolation

to obtain a sample input rate of a digital transceiver. See col. 12, lines 27-31; col. 22, lines 32-

35. There is no teaching or suggestion that parameter values for all carriers in a carrier subset

can be retrieved through interpolation.

Consequently, the combination of Mukherjee with the APA is not obvious and it is

apparent that the Examiner's reasoning is merely based upon hindsight upon viewing the

Applicant's invention.

For at least the above reasons, claim 1 and its dependent claims should be deemed

allowable. To the extent claim 7 recites similar elements, claim 7 and its dependent claims

should be deemed allowable for at least the same reasons.

II.   Rejection of claim 10 under 35 U.S.C. § 103

Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the APA of

the instant application in view of Mukherjee and further in view of Gultekin et al. (U.S. Patent

No. 6,215,793). Claim 10 should be deemed allowable by virtue of its dependency to claim 7 for

the reasons set forth above. Moreover, Gultekin does not cure deficiencies of the APA in view

of Mukherjee.

III.   Allowable Subject Matter

The Examiner has indicated that claims 3, 4, 6, 8, 9, 11 and 12 contain allowable subject

matter and would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims. At the present time, Applicant has not rewritten

claims 3, 4, 6, 8, 9, 11 and 12 in independent form, since Applicant believes claims 3, 4, 6, 8, 9,
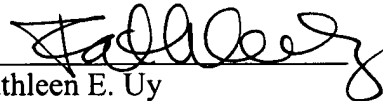
11 and 12 should be deemed allowable, without amendment, by virtue of their dependency to

claims 1 and 7 for the reasons set forth above.

IV.   Conclusion

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

SUGHRUE MION, PLLC   Ruthleen E. Uy
Telephone: (202) 293-7060   Registration No. 51,361
Facsimile: (202) 293-7860

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